Xavier Llovet

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5609961/publications.pdf

Version: 2024-02-01

91	1,708	257101	301761
papers	citations	24 h-index	39 g-index

94	94	94	908
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cross Sections for Inner-Shell Ionization by Electron Impact. Journal of Physical and Chemical Reference Data, 2014, 43, .	1.9	133
2	Monte Carlo simulation of bremsstrahlung emission by electrons. Applied Physics Letters, 2002, 80, 3228-3230.	1.5	78
3	Monte Carlo simulation of x-ray spectra generated by kilo-electron-volt electrons. Journal of Applied Physics, 2003, 93, 3844-3851.	1.1	69
4	Correction of secondary X-ray fluorescence near grain boundaries in electron microprobe analysis: Application to thermobarometry of spinel lherzolites. American Mineralogist, 2003, 88, 121-130.	0.9	69
5	Electron Probe Microanalysis: A Review of the Past, Present, and Future. Microscopy and Microanalysis, 2015, 21, 1053-1069.	0.2	66
6	Monte Carlo simulation of x-ray emission by kilovolt electron bombardment. Journal of Applied Physics, 1998, 83, 6038-6049.	1.1	60
7	Monte Carlo simulation of bremsstrahlung emission by electrons. Radiation Physics and Chemistry, 2006, 75, 1201-1219.	1.4	58
8	Measurements of K-shell ionization cross sections of Cr, Ni and Cu by impact of 6.5-40 keV electrons. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 3761-3772.	0.6	55
9	Secondary fluorescence in electron probe microanalysis of material couples. Journal Physics D: Applied Physics, 2012, 45, 225301.	1.3	54
10	PENEPMA: A Monte Carlo Program for the Simulation of X-Ray Emission in Electron Probe Microanalysis. Microscopy and Microanalysis, 2017, 23, 634-646.	0.2	54
11	A Review of Biosensor and Industrial Applications of pH-ISFETs and an Evaluation of Honeywell's "DuraFET". Mikrochimica Acta, 1999, 131, 91-98.	2.5	51
12	Measurements ofL-shell x-ray production cross sections of W, Pt, and Au by 10â€“30-keV electrons. Physical Review A, 2002, 66, .	1.0	48
13	Low-Voltage Electron-Probe Microanalysis of Feâ€“Si Compounds Using Soft X-Rays. Microscopy and Microanalysis, 2013, 19, 1698-1708.	0.2	45
14	Electron probe microanalysis: A review of recent developments and applications in materials science and engineering. Progress in Materials Science, 2021, 116, 100673.	16.0	45
15	Measurements of absoluteK-shell ionization cross sections andL-shell x-ray production cross sections of Ge by electron impact. Physical Review A, 2004, 69, .	1.0	42
16	Near-threshold absolute<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>M</mml:mi></mml:math>-shell x-ray production cross sections of Au and Bi by electron impact. Physical Review A, 2008, 78, .	1.0	40
17	Electron Probe Microanalysis of Thin Films and Multilayers Using the Computer Program XFILM. Microscopy and Microanalysis, 2010, 16, 21-32.	0.2	40
18	Monte Carlo simulation of X-ray emission using the general-purpose codePENELOPE. Surface and Interface Analysis, 2005, 37, 1054-1058.	0.8	39

#	Article	IF	Citations
19	AbsoluteK-shell ionization cross sections andLÎ±andLÎ²1x-ray production cross sections of Ga and As by1.5â€“39â^'keVelectrons. Physical Review A, 2006, 73, .	1.0	37
20	Measurements of absolute L- and M-subshell x-ray production cross sections of Pb by electron impact. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 115202.	0.6	35
21	Monte Carlo simulation of characteristic x-ray emission from thick samples bombarded by kiloelectronvolt electrons. Journal Physics D: Applied Physics, 2008, 41, 105304.	1.3	32
22	Monte Carlo Simulation in Electron Probe Microanalysis. Comparison of Different Simulation Algorithms. Mikrochimica Acta, 2006, 155, 67-74.	2.5	27
23	Cross sections for electron interactions in condensed matter. Surface and Interface Analysis, 2005, 37, 824-832.	0.8	25
24	Electron Probe Microanalysis of Ni Silicides Using Ni-L X-Ray Lines. Microscopy and Microanalysis, 2016, 22, 1233-1243.	0.2	25
25	Secondary fluorescence effects in microbeam analysis and their impacts on geospeedometry and geothermometry. Chemical Geology, 2018, 490, 22-29.	1.4	25
26	Uncertainty and capability of quantitative EPMA at low voltage â€“ A review. IOP Conference Series: Materials Science and Engineering, 2012, 32, 012016.	0.3	24
27	PENEPMA: a Monte Carlo programme for the simulation of X-ray emission in EPMA. IOP Conference Series: Materials Science and Engineering, 2016, 109, 012009.	0.3	24
28	An inter-laboratory comparison of EPMA analysis of alloy steel at low voltage. IOP Conference Series: Materials Science and Engineering, 2012, 32, 012014.	0.3	21
29	M-subshell ionization cross sections of U by electron impact. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 055202.	0.6	20
30	Relative Cross Sections for L- and M-Shell Ionization by Electron Impact. Mikrochimica Acta, 2000, 132, 163-171.	2.5	19
31	Measurements of absolute cross sections for K-shell ionization of Fe and Mn by electron impact. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 973-982.	0.6	19
32	Determination of Nitrogen in Duplex Stainless Steels by EPMA. Mikrochimica Acta, 2002, 139, 105-110.	2.5	19
33	Calculation of multiple-scattering angular distributions of electrons and positrons. Radiation Physics and Chemistry, 2005, 74, 264-281.	1.4	19
34	EPMA of Porous Media: A Monte Carlo Approach. Mikrochimica Acta, 2000, 132, 189-199.	2.5	17
35	Absolute Determination of Characteristic X-Ray Yields with a Wavelength-Dispersive Spectrometer. Mikrochimica Acta, 2006, 155, 199-204.	2.5	13
36	Virtual standard for wavelength-dispersive electron-probe microanalysis. Mikrochimica Acta, 2008, 161, 427-432.	2.5	13

#	Article	IF	Citations
37	Abellaite, NaPb2 (CO3)2 (OH), a new supergene mineral from the Eureka mine, Lleida province, Catalonia, Spain. European Journal of Mineralogy, 2017, 29, 915-922.	0.4	13
38	Systematic discrepancies in Monte Carlo predictions ofk-ratios emitted from thin films on substrates. IOP Conference Series: Materials Science and Engineering, 2012, 32, 012024.	0.3	12
39	Thickness Determination of Ultra-Thin Films on Si Substrates by EPMA. Mikrochimica Acta, 2004, 145, 13-17.	2.5	11
40	Soluble fraction of stabilising elements in ferritic stainless steel. Mikrochimica Acta, 2008, 161, 323-327.	2.5	11
41	Measurements of the surface ionization in multilayered specimens. X-Ray Spectrometry, 2004, 33, 376-386.	0.9	10
42	Total M-shell X-ray yields from a thick Pt target irradiated by 10â€“25keV electrons. Journal of Electron Spectroscopy and Related Phenomena, 2012, 185, 23-26.	0.8	10
43	Bremsstrahlung spectra produced from kilovolt electrons incident on thick targets of Ti, W and Pt. Journal Physics D: Applied Physics, 2008, 41, 065205.	1.3	9
44	Secondary Fluorescence in WDS: The Role of Spectrometer Positioning. Microscopy and Microanalysis, 2018, 24, 604-611.	0.2	9
45	Distribution of REE-bearing minerals in felsic magmatic rocks and paleosols from Gran Canaria, Spain: Intraplate oceanic islands as a new example of potential, non-conventional sources of rare-earth elements. Journal of Geochemical Exploration, 2019, 204, 270-288.	1.5	9
46	Simulation of x-ray spectra generated by electron impact on solids. X-Ray Spectrometry, 1999, 28, 121-127.	0.9	8
47	Numerical correction for secondary fluorescence across phase boundaries in EPMA. IOP Conference Series: Materials Science and Engineering, 2010, 7, 012008.	0.3	8
48	Measurements of absolute MÎ± xâ€ray production cross sections of heavy elements Au, Pb, Bi, and U by electron impact. Surface and Interface Analysis, 2014, 46, 1170-1173.	0.8	8
49	Use of the Bethe equation for inner-shell ionization by electron impact. Journal of Applied Physics, 2016, 119, .	1.1	8
50	Determination of Mass Attenuation Coefficients of Th, U, Np, and Pu for Oxygen KÎ± X-Rays Using an Electron Microprobe. Microscopy and Microanalysis, 2020, 26, 194-203.	0.2	8
51	Influence of simulation parameters on the speed and accuracy of Monte Carlo calculations using PENEPMA. IOP Conference Series: Materials Science and Engineering, 2018, 304, 012009.	0.3	7
52	Measurement of angular distributions of K x-ray intensity of Ti and Cu thick targets following impact of 10â€“25 keV electrons. Journal of Electron Spectroscopy and Related Phenomena, 2017, 216, 17-22.	0.8	6
53	Feâ€“Ti(â€“V) Oxide Deposits of the Kunene Anorthosite Complex (SW Angola): Mineralogy and Thermo-Oxybarometry. Minerals (Basel, Switzerland), 2017, 7, 246.	0.8	6
54	Comment on â€œInvestigating Earth's Formation History Through Copper & Sulfur Metalâ€“Silicate Partitioning During Coreâ€Mantle Differentiationâ€•by Mahan et al.. Journal of Geophysical Research: Solid Earth, 2019, 124, 12837-12844.	1.4	6

#	Article	IF	Citations
55	Reprint of: Electron probe microanalysis: A review of recent developments and applications in materials science and engineering. Progress in Materials Science, 2021, 120, 100818.	16.0	6
56	Simulation of EPMA Spectra Using PENELOPE. Microscopy and Microanalysis, 2007, 13, .	0.2	5
57	New measurements of the surface ionization for quantitative electron probe microanalysis. X-Ray Spectrometry, 2011, 40, 47-54.	0.9	5
58	Study of K-line radiation of thick titanium produced in collisions of keV electrons. Applied Radiation and Isotopes, 2011, 69, 1380-1384.	0.7	5
59	Analysis of Chemical Changes and Microstructure Characterization during Deformation in Ferritic Stainless Steel. Microscopy and Microanalysis, 2013, 19, 959-968.	0.2	5
60	Measurement of the angular distribution of thick target bremsstrahlung produced by 10â€“25â€¯keV electrons incident on Ti and Cu targets. Radiation Physics and Chemistry, 2018, 150, 82-89.	1.4	5
61	Fe-Ti-Zr metasomatism in the oceanic mantle due to extreme differentiation of tholeiitic melts (Moa-Baracoa ophiolite, Cuba). Lithos, 2020, 358-359, 105420.	0.6	5
62	Monte Carlo Simulation of Electron Transport and X-Ray Generation. I. Electron Elastic and Inelastic Scattering. Mikrochimica Acta, 2004, 145, 193-202.	2.5	4
63	Modern Developments and Applications in Microbeam Analysis. Proceedings of the 8th Workshop of the European Microbeam Analysis Society (EMAS), Chiclana de la Frontera, Spain, May 18?22, 2003. Mikrochimica Acta, 2004, 145, 1-2.	2.5	4
64	Towards Reliable Quantification of Steel Alloys at Low Voltage. Microscopy and Microanalysis, 2014, 20, 700-701.	0.2	4
65	Electron probe microanalysis of Ni-silicides at low voltage: difficulties and possibilities. IOP Conference Series: Materials Science and Engineering, 2016, 109, 012005.	0.3	4
66	Monte Carlo simulation and fundamental quantities. IOP Conference Series: Materials Science and Engineering, 2018, 304, 012014.	0.3	4
67	Soft X-ray EPMA of submicron phase lunar Fe-Si compounds. Microscopy and Microanalysis, 2012, 18, 1728-1729.	0.2	3
68	Optimization of Actinide Quantification by Electron Probe Microanalysis. IEEE Transactions on Nuclear Science, 2014, 61, 1977-1983.	1.2	3
69	A tracking algorithm for Monte Carlo simulation of surface roughness in EPMA measurements. IOP Conference Series: Materials Science and Engineering, 2018, 304, 012015.	0.3	3
70	Correction of Secondary Fluorescence Across Phase Boundaries in Electron Probe Microanalysis of Mineral Inclusions. Microscopy and Microanalysis, 2020, 26, 895-905.	0.2	3
71	Electron Probe Microanalysis of Transition Metals using L lines: The Effect of Self-absorption. Microscopy and Microanalysis, 2022, 28, 123-137.	0.2	3
72	Monte Carlo Simulation of Electron Transport and X-Ray Generation. II. Radiative Processes and Examples in Electron Probe Microanalysis. Mikrochimica Acta, 2004, 145, 111-120.	2.5	2

#	Article	IF	Citations
73	Role of native metal oxide layer on emitted metal L line in low-voltage electron-probe microanalysis. Materials at High Temperatures, 2009, 26, 21-24.	0.5	2
74	Electron Probe Microanalysis. , 2018, , 30-30.		2
75	High Speed Matrix and Secondary Fluorescence Effects From Fundamental Parameter Monte Carlo Calculations. Microscopy and Microanalysis, 2012, 18, 1742-1743.	0.2	1
76	EMAS 2013 Workshop: 13th European Workshop on Modern Developments and Applications in Microbeam Analysis. IOP Conference Series: Materials Science and Engineering, 2014, 55, 011001.	0.3	1
77	Angular dependence of KÎ²/KÎ± intensity ratios of thick Ti and Cu pure elements from 10â€“25ÂkeV electron bombardment. Indian Journal of Physics, 2018, 92, 827-833.	0.9	1
78	Simulation of X-ray Spectra Generated by Kilovolt-Electron Bombardment. , 2001, , 105-110.		1
79	X-Ray Microanalysis with Penelope. Microscopy and Microanalysis, 2001, 7, 688-689.	0.2	0
80	Ionization Cross Sections for Quantitative Electron Probe Microanalysis. Microscopy and Microanalysis, 2001, 7, 672-673.	0.2	0
81	Review of recent work using the simulation code PENELOPE. AIP Conference Proceedings, 2003, , .	0.3	0
82	Monte Carlo Simulation of EPMA Measurements on Complex Specimens Using PENELOPE. Microscopy and Microanalysis, 2006, 12, 846-847.	0.2	0
83	Electron Probe Microanalysis of Thin Films and Multilayers Using the X-FILM Computer Code. Microscopy and Microanalysis, 2009, 15, 516-517.	0.2	0
84	EPMA and EBSD analysis of the chemical and structural changes in 16 wt% chromium stainless steel during deformation. IOP Conference Series: Materials Science and Engineering, 2012, 32, 012018.	0.3	0
85	Optimization of actinide quantification by electron probe microanalysis. , 2013, , .		0
86	European Microbeam Analysis Society's 14th European Workshop on Modern Developments and Applications in Microbeam Analysis (EMAS 2015), PortoroÅ¾, Slovenia, 3â€“7 May 2015. IOP Conference Series: Materials Science and Engineering, 2016, 109, 011001.	0.3	0
87	Angular and impact energy dependence of intensity ratio of KÎ±,Î² x-rays to bremsstrahlung radiation emitted from 10-25 keV electrons incident on a pure thick Cu (Z=29) target. AIP Conference Proceedings, 2019, , .	0.3	0
88	Electron probe microanalysis of transition metals using L-lines: the effect of self-absorption. Microscopy and Microanalysis, 2021, 27, 1096-1097.	0.2	0
89	Status of PENELOPE. , 2001, , 147-152.		0
90	Application of a New Monte Carlo Simulation Algorithm to Electron Probe Microanalysis. , 1996, , 409-417.		0

#	Article	IF	Citations
91	Surface Ionization of Thin Films on Substrates: Measurement and Simulation. , 1998, , 155-161.		0